

Please amend the present application as follows:

IN THE CLAIMS

The following is a copy of Applicants claims that identifies language being added with underlining (“ ”) and language being deleted with strikethrough (“~~—~~”) or placed in double brackets (“[[]]”), as applicable:

1. (Currently amended) A method of providing vascular calcification therapy to a human having renal disease or failure, and is in need of treatment, comprising the steps of:

administering to the human during dialysis a dialysate having an effective amount of a pyrophosphate-type compound, wherein the ~~human has renal disease or failure~~ pyrophosphate-type compound includes a substituent that is selected from at least one of:

(i) hydrogen,

(ii) a cation selected from at least one of lithium, sodium, potassium, calcium, magnesium, chromium, manganese, zinc, and

(iii) a functional group that is ionically bonded to or in free association with oxygen of the pyrophosphate, and

wherein the pyrophosphate-type compound is administered to the human in a dialysate fluid at a concentration of pyrophosphate-type compound of at least about 1 μ M; and

inhibiting vascular calcification in the human with the effective amount of pyrophosphate-type compound.

2. (Original) The method of claim 1, wherein the pyrophosphate-type compound is an alkali metal pyrophosphate.

3. (Original) The method of claim 1, wherein the pyrophosphate-type compound is

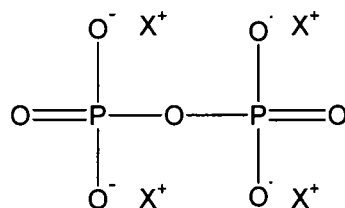
chosen from tetraalkali metal pyrophosphate, dialkali metal diacid pyrophosphate, trialkali metal monoacid pyrophosphate, and mixtures thereof.

4. (Original) The method of claim 1, wherein the pyrophosphate-type compound is chosen from tetrasodium pyrophosphate, tetrapotassium pyrophosphate, dicalcium pyrophosphate, phosphoric acid, sodium acid pyrophosphate, sodium dihydrogen pyrophosphate, and mixtures thereof.

5. (Original) The method of claim 1, wherein the vascular calcification is caused by renal disease or failure.

6-8. (Canceled)

9. (Currently amended) The method of claim 1, wherein the pyrophosphate-type compound comprises the following structural formula:



wherein the X is chosen from at least one of a hydrogen and a cation.

10-11. (Canceled)

12. (Previously Presented) The method of claim 1, wherein the pyrophosphate-type compound is administered to the human in a dialysate fluid at a concentration of pyrophosphate-type compound from about 1 μM to about 10 μM .

13. (Previously Presented) The method of claim 1, wherein the pyrophosphate-type compound is administered to the human in a dialysate at a concentration from about 3 μM to about 5 μM .

14-34. (Canceled)